

Application No. 10/064,939
Docket No. 13DV-13676
Amendment dated April 26, 2004

[0020] In an investigation leading to this invention, TBC's were deposited by EBPVD on specimens formed of the superalloy René ~~René~~ N5 on which a PtAl diffusion bond coat had been deposited. The specimens were coated by evaporating a single ingot of the desired composition. The TBC's were deposited to have thicknesses on the order of about 75 to about 150 micrometers. The chemistries and thermal conductivities of the coatings are summarized in Table II below. Thermal conductivities are reported at about 890°C ~~890°C~~ following both stabilization at about 1000°C and a thermal aging treatment in which the specimens were held at about 1200°C for about two hours to determine the thermal stability of their coatings.